SHUL'GIN, B.V.; GAVRILOV, F.F.; DVINYANINOV, B.L.

Dielectric constant of lithium hydride single crystals. Izv. vys. ucheb. zav.; fiz. 8 no.3:175 '65. (MIRA 18:9)

1. Ural'skiy politekhnicheskiy institut imeni S.M.Kirova.

L 04606-67 EWT(m)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6032851 SOURCE CODE: UR/0020/66/170/003/0552/0553

35

AUTHOR: Pinayeva, M. M.; Shul'gin, B. V.; Krylov, Ye. I.

B

ORG: Ural Polytechnic Institute im. S. M. Kirov (Ural'skiy politekhnicheskiy institut)

27 27

TITLE: On the luminescence of europium orthotantalate

SOURCE: AN SSSR. Doklady, v. 170, no. 3, 1966, 552-553

TOPIC TAGS: europium compound, luminescence

ABSTRACT: An investigation was made of the luminescence of europium orthotantalate and lanthanum orthotantalate in view of their possible use in lasers. Excitation was produced by ultraviolet light with a wavelength of 265 mμ from the full spectrum of a mercury vapor lamp. A monochromator, a photoelectronic multiplier with high sensitivity in the red region, and an amplifier were used to analyze the luminescence spectrum. All experiments were performed at 300K. In the $EuTaO_4$ spectrum, the strongest line observed was 608 mμ with a 22-mμ halfwidth. Also observed were the 595, 695, 656, and 538 mμ lines (given in the order of decreasing sensitivity). The measurements of $LaTaO_4$ showed high luminescence in the investigated region. Here, the presence of the 608, 538, and 695 mμ lines demonstrates a sufficiently high luminescence intensity of europium contained in the $LaTaO_4$ matrix at a concentration of 0.01%. Because of the lack of a 220-mμ excitation source, the maximum of the excitation

Card 1/2 UDC: 546.651 + 546.883:535.370

L 04606-67

ACC NR: AP6032851 O

spectrum of $EuTaO_4$ could not be established. However, an evaluation of the measurements showed that at this excitation level the luminescence output of this material can be close to unity, i.e., twice as high as the estimated output of $LaTaO_4$. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 25Dec65/ ORIG REF: 002/ OTH REF: 007/ ATD PRESS: 5100

Card 2/2 egh

SHUL'GIN, D. F.

Mathematical Reviews
Vol. 15 No. 4
Apr. 1954
Mechanics

Šul'gin, D. F. Flow about a composite profile of variable permeability. Akad. Nauk SSSR. Prikl. Mat. Meh. 17, 285–292 (1953). (Russian)

Envisageons un écoulement permanent plan du liquide, uniforme à l'infini, incliné sur l'axe *Ox*. Sur une longueur finie de cet axe se trouve réparti un nombre fini d'obstacles rectilignes. Tchaplyguine [Oeuvres, t. II, Gostehizdat, Moscow-Leningrad, 1948, pp. 431–471; ces Rev. 14, 609] a formé la fonction caractéristique du régime. L'auteur par un passage à la limite, étend ces conclusions au cas où le nombre de segments augmenterait indéfiniment alors que la longueur de chacun d'eux tendait vers zéro; la densité des parties pleines étant inférieure à 1. Dans la deuxième partie du mémoire, l'auteur reprend la configuration étudiée par Tchaplyguine, mais en supposant que les obstacles sont attaqués par un jet gazeux subsonique. Moyennant quelques hypothèses empruntées à la théorie des ailes minces, le problème est ramené à une équation intégrale singulière que l'on peut résoudre. *J. Kravtchenko* (Grenoble).

SHUL'GIN, D.F.

Motion of a slightly curved permeable rotation surface. Trudy SAGU no.54:137-146 '54. (MLRA 10:3)
(Aerodynamics)

SOV/124-57-4-4015

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 4, p 24 (USSR)

AUTHOR: Shul'gin, D. F.

TITLE: The Unsteady Motion of a Thin Permeable Profile in a Fluid (Neustanovivsheyesya dvizheniye tonkogo pronitsayemogo profilya v zhidkosti)

PERIODICAL: Tr. Sredneaz. un-ta, 1956, Nr 66, pp 61-67

ABSTRACT: The paper examines the unsteady motion of a slightly cambered permeable profile. The change in pressure during passage through the porous surface is assumed in the form of $\Delta p = av + \lambda$ where a and λ are experimentally derived constants characterizing the permeability of the profile and v is the velocity of the permeation. The author applies to his solution of the problem L. I. Sedov's method [Sedov, L. I., Ploskiye zadachi gidrodinamiki i aerodinamiki (Plane Problems of Hydrodynamics and Aerodynamics). Gostekhizdat, Moscow-Leningrad, 1950, pp 46-80]. The author reduces the solution of the problem to a system of two first-order integral equations. He finds an exact solution of that system for the harmonic oscillations of a profile superimposed on a steady-state translational motion with a constant velocity.

Card 1/1

P. F. Korotkov

51. **Irregular Motion of a Thin Porous Airfoil**

"Irregular Motion of a Thin Porous Airfoil in a Liquid," by D. F. Shul'gin, Tr. Sredneaz. un-ta, 1956, Issue 66, pp 61-67 (from Referativnyy Zhurnal -- Mekhanika, No 4, Apr 57, Abstract No 4015, by P. F. Korotkov)

"This article discusses the irregular motion of a slightly curved porous airfoil. The change of pressure which takes place during the passing of the liquid over the porous surface is expressed in the form:

$$\Delta p = av + \eta,$$

where a and η are the experimentally obtained constants which characterize the porosity of the airfoil, and v is the velocity of penetration.

"For the solution of the problems, the author uses the method of L. I. Sedov (Sedov, L. I., Plaskiye Zadachi Gidrodinamiki i Aerodinamiki, (Plane Problems in Hydrodynamics and Aerodynamics), Moscow-Leningrad, 1950, pp 46-80). The author reduces the solution of the problems to a system of two integral equations of the first order. In this system a precise solution is found for the harmonic vibrations of an airfoil with a steady forward motion with constant velocity." (U)

SOV/24-58-10-8/34

AUTHORS: Vasil'yev, V. A., and Shul'gin, D. F. (Tashkent)

TITLE: Flow of Percolation Water into Symmetrically Placed Water Intakes (Pritok infil'tratsionnoy vody v simmetrichno raspolozhennyye vodopriyemniki)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, 1958, Nr 10, pp 46-50 (USSR)

ABSTRACT: Precipitation falls on a strip of width $2l$ (Fig.1) symmetrically placed between two buried water intakes, separated by a distance $2L$. The paper discusses the shape of the underground water surface resulting from these conditions. To solve the problem, the region is transformed conformally, and by applying complex variable methods, the theory of linear differential equations and the boundary conditions, the required shape is determined. There are 4 figures and 3 Soviet references.

SUBMITTED: February 13, 1958.

Card 1/1

VASIL'YEV, V.A. (Tashkent); SHUL'GIN, D.F. (Tashkent)

Performance of screem pipes of drilled wells. Izv. AN SSSR. Otd. tekh.nauk.Mekh. i mashinostr. no. 1:135-139 Ja-F '61.
(MIRA 14:2)

(Oil well drilling) (Filters and filtration)

VASIL'YEV, V.A.; SHUL'GIN, D.F.

Theory of the performance of the filter of a water-intake well. Nauch. trudy TashGU no.209. Mat. nauki no.23:3-15 '62. (MIRA 16:8)

SHUL'GIN, D.F.

Nonuniform perforation of well filters. Izv. vys. uch. zav.; neft' i gaz 5 no.9:111-116 '62. (MIRA 17:5)

1. Tashkentskiy gosudarstvennyy universitet im. V.I. Lenina.

SHUL'GIN, G.T.

KOVUN, P.K., NEVZOROV, A.P., ANTONENKO, G.P.,; BUDINA,L.V.; VORONINA, Ye.P.; GUSEV, P.I.; YELAGIN, M.N., ZHURAVLEV, M.A., ZALOZNYY, K.D.: KOMKOV,V.N.; KOROBOV, A.S.;KORCHAGIN, V.N.; LAVROV, V.N.; LAPSHINA, O.V.; LUTIKOV,I.Ye.; MAKEVNIN, A.Ya.;MOROZOVA, F.I.;NEVZOROV, A.P.;PONOMARCHUK, M.K.;PUCHKOV, A.M.; RAZMOLOGOVA, A.M.;RUBIN, S.M.; SELEZNEVA, O.V.;SEMENOVA, F.I.; SPIRIDONOVA, A.I.;SUSHCHEVSKIY, M.G.;USOV, M.P.; TARKOVSKIY, M.I.; CHENYKAYEVA, Ye.A.;SHENDRIKOV, G.L.; SHUL'GIN, G.T.;TSITSIN, N.V.,akademik, redaktor;REVENKOVA, A.I.,redaktor; KHOKHRINA, N.M., khudozhestvennyy redaktor; VESKOVA, Ye.I., tekhnicheskiy redaktor; PEVZNERV.B.I., tekhnicheskiy redaktor.

[Plant breeding at the 1955 All-Union Agricultureal Exhibition] Rastenievodstvo na Vsesoiuznoi sel'skokhoziaistvennoi vystavke 1955 goda. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1956. 687 p. (MLRA 10:4)
(Moscow--Plant breeding--Exhibitions)

SHUL'GIN, G.T., agronom.

A most important means for increasing production and lowering the cost of essential oils. Masl.-zhir. prom. 23 no.4:14-16 '57. (MLRA 10:5)

1. Ministerstvo sel'skogo khozyaystva SSSR.
(Aromatic plants)

SHUL'GIN, G. T., agronom.

Aromatic plants in China. Nauka i pered. op. v sel'khoz. 8 no. 7:74-76 Jl '58. (MIRA 11:8)
(China--Aromatic plants)

SHUL'GIN, Georgiy Tikhonovich; ZALOZNYY, Kirill Danilovich; BYKOVA, M.G., red.; GOR'KOVA, Z.D., tekhn.red.

[Concise manual of aromatic plants] Kratkii spravochnik po efiromaslichnym kul'turam. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1959. 160 p. (MIRA 13:2)

(Aromatic plants)

ALEKSEYEVA, Ye.I., kand. sel'khoz. nauk; BUZINOV, P.A., kand. sel'khoz. nauk; VODOLAGIN, V.D.; VOLKHOVSKAYA, U.V.; GLUSHCHENKO, N.N., kand. biol. nauk; GURVICH, N.L., doktor biol. nauk; ZHELEZNOV, P.A., kand. sel'khoz. nauk; KSENDZ, A.T.; LESHCHUK, T.Ya.; LUK'YANOV, I.A., kand. sel'khoz. nauk; MAYCHENKO, Z.G., kand. sel'khoz. nauk; TANASIYENKO, F.S., kand. khim. nauk; ZNAMENSKIY, M.P.; PERSIDSKAYA, K.G.; PODLESNOVA, A.F.; ROGOCHIY, I.Ya.; REZNIKOV, A.R.; SHUL'GIN, G.T.; KHOTIN, A.A., doktor sel'khoz. nauk; LAPSHINA, O.V., red.; MINENKOVA, V.R., red.; MAKHOVA, N.N., tekhn. red.; BALLOD, A.I., tekhn. red.

[Aromatic plants] Efiromaslichnye kul'tury. Moskva, Sel'-khozizdat, 1963. 358 p. (MIRA 16:12)
(Ukraine--Aromatic plants)

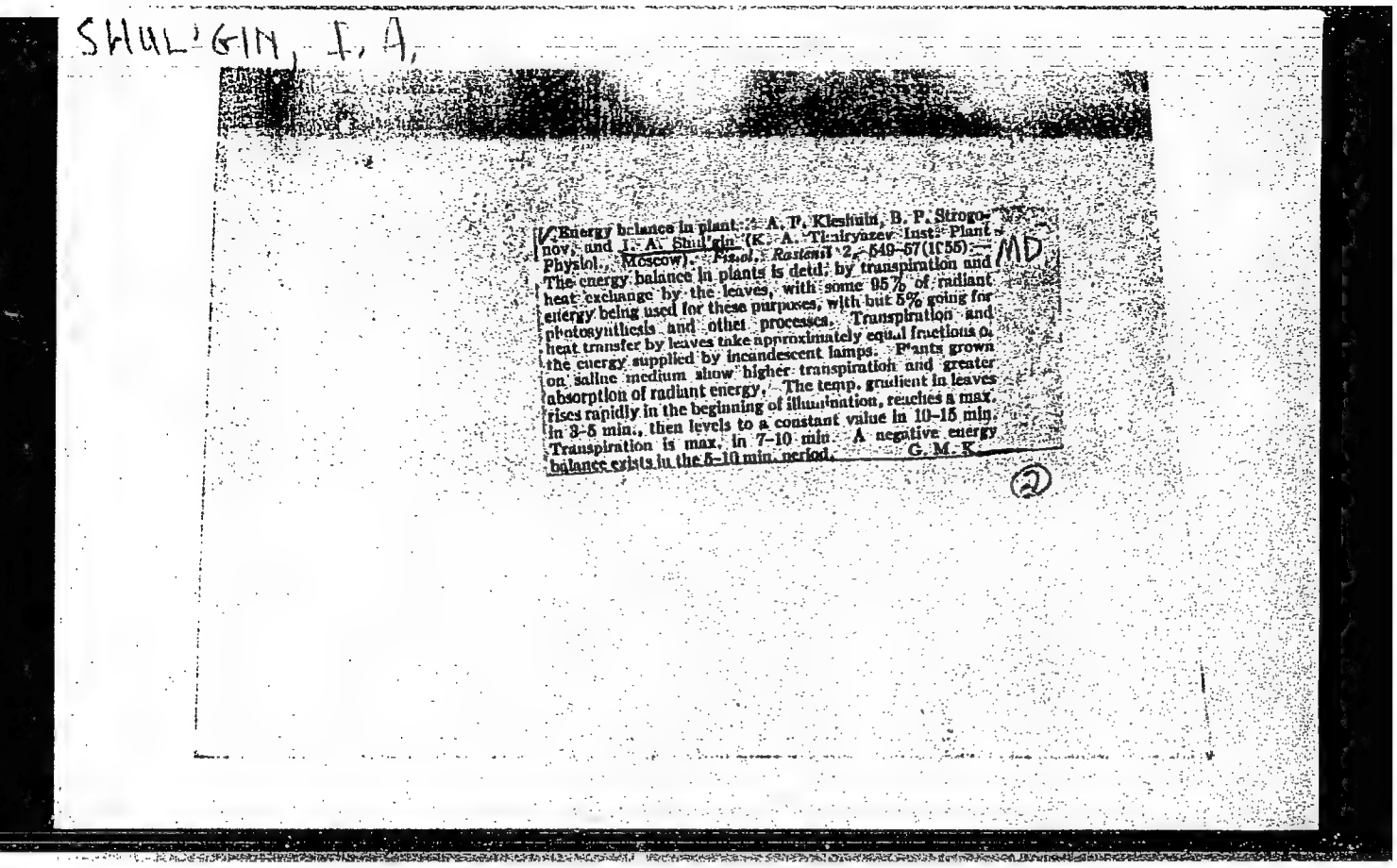
KLESHNIN, A.F.; STROGONOV, B.P.; SHUL'GIN, I.A.

New method for determining transpiration. Fiziol.rast. 1 no.2: 188-192 N-D '54. (MIRA 8:10)

1. Institut fiziologii rasteniy imeni K.A.Timiryazeva Akademii nauk SSSR, Moscow

(Plants--Transpiration)

SHUL'GIN, I. A.



Energy balance in plant. A. P. Kleshnin, B. P. Strogonov, and I. A. Shul'gin (K. A. Timiryazev Inst. Plant Physiol., Moscow). *Fiziol. Rastenii* 2, 549–57(1955).—MD. The energy balance in plants is detd. by transpiration and heat exchange by the leaves, with some 95% of radiant energy being used for these purposes, with but 5% going for photosynthesis and other processes. Transpiration and heat transfer by leaves take approximately equal fractions of the energy supplied by incandescent lamps. Plants grown on saline medium show higher transpiration and greater absorption of radiant energy. The temp. gradient in leaves rises rapidly in the beginning of illumination, reaches a max. in 3–5 min., then levels to a constant value in 10–15 min. Transpiration is max. in 7–10 min. A negative energy balance exists in the 5–10 min. period. G. M. K.

(2)

Shul'gin, I.A.

USSR/Plant Physiology - Water Regimen. I.

Abs Jour : Ref Zhur - Biol., No 18, 1958, 82018

Author : Kleshnin, A.F., Shul'gin, I.A.
Inst : -
Title : The Intensity of Transpiration Under artificial Light.

Orig Pub : Fiziol. rasteniy, 1957, 4, No 6, 548-553

Abstract : Plant transpiration under strong (35000-1.000.000 erg/cm sec) illumination by incandescent lamps attained its maximum during the first 15 min and then diminished and became stable. It was strongest in the Solanum bycopersicum, Malus communis, Acer platanoides. It was weaker for the Cucumis sativus. It was smallest for Calla ethiopica, Ilex pyramidalis. The transpiration of 20 of 23 studied species is rigorously proportional to the illumination. The maximum transpiration intensity (547 g/m^2-hour) is noted in the Populus tremula in a hot-house and at 19-26° and under integral lamp radiation of

Card 1/2

USSR/Plant Physiology - Water Regimen I.

Abs Jour : Ref Zhur - Biol., No 18, 1958, 82018

1.000.000 erg/cm^2. sec. --- L.I. Krasovskiy.

Card 2/2

KLESHNIN, A.F., SHUL'GIN, I.A.

Leaf temperature of plants in artificial light. Biofizika 3 no.4:438-446 '58 (MIRA 11:8)

1. Institut fiziologii rasteniy AN SSSR, Moskva.
(PLANTS, EFFECT OF LIGHT ON)

SHUL'GIN, I.A.; KLESHNIN, A.F.; VERBOLOVA, M.I.

Photoelectric determination of the optical properties of plant leaves.
Fiziol.rast. 5 no.5:473-476 S-O '58. (MIRA 11:11)

1. Institut fiziologii rasteniy imeni K.A. Timiryazeva AN SSSR, Moskva i Kafedra darvinizma Moskovskogo gosudarstvennogo universiteta, Moskva.
(Leaves--Optical properties) (Photoelectric measurements)

17(1)

AUTHORS: Kleshnin, A. F., Shul'gin, I. A., Bokovaya, M. M. SOV/20-122-5-53/56

TITLE: On the Specific Heat Capacity and the Bound Water of Plants (Ob udel'noy teplcyemkosti i svyazannoy vode rasteniy)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 5, pp 940-943 (USSR)

ABSTRACT: In the present paper the results of the determinations of bound water according to the specific heat capacity of plant tissues are described. As it is known, the specific heat capacity of free water is equal to 1, those of iron, however, and of crystal water 0.5 cal/g·degree. In colloids (humus, starch, gelatin, gum arabic) the specific heat capacity decreases with the decrease of the water content in the colloid from 1 to 0.5 cal/g·degree (Refs 1-6). This fact makes possible the use of the index value in question of different states of the water as well as the elaboration of a method of determination for the various forms of water in the plant by proceeding from the additivity principle (printsip additivnosti). The authors determined the heat capacity calorimetrically in petroleum (for maize and pea

Card 1/4

seeds) or in water (leaves of various types of plants). The results obtained are given in the tables 1-4 and figures 1-3. The authors proved by these experiments that the specific heat capacity of absolutely dry maize seeds is 0.295, and that of the pea seeds 0.383 cal/g.degree (Figs 1 : 3, and 4). In the case of a high water content the specific heat capacity of the seeds increases linearly (Figs 1:1 and 2), whereas it considerably deviates from the straight line in the case of a low humidity (to 25 %). This deviation means that the average specific heat capacity of the water C_w calculated according to the formula

$$C_w = \frac{C_f - C_m (1 - W)}{W} \quad (1)$$

is not constant but changes to a high degree depending on the humidity of the seeds (Figs 1:5). From all this the authors draw the following conclusions: 1.-In the plant tissue there are at least three forms of water: a) one firmly bound (specific heat capacity = 0.5 cal/g.degree) b) one loosely bound (capacity 0.5-1 cal/g.degree) and c) free water

(1 cal/g·degree). 2.-The ratio between the firmly bound and the loosely bound water in the seeds amounts to 1:2 (Fig 2). When proceeding from the physical heterogeneity of water the additivity equation is modified taking into account the plant tissues (2). From the equation (2) the authors derive the content of the firmly bound water H and of the loosely bound water 2H, respectively:

$$H = \left[W + C_m (1 - W)\right] - C_f \qquad (3)$$

Table 1 shows the calculation results according to formula (3) for 16 types of plants. The maximum content of firmly and loosely bound water was found in the leaves of the mesophytes (32.46 %, Table 1) and of the evergreen xerophytes (24.99 %, Table 2), the minimum content was found in hygrophytes (8.61 %, Table 3) and succulents (5.76 %, Table 4). The specific heat capacity of normal living leaves also depends on the ecological group (Fig 3). Its minimum is found in xerophytes (0.709, Table 2) and its maximum in succulents (0.956 cal/g·degree, Table 4). Mesophytes and hygrophytes are in between these two (0.820, Table 1, and 0.908, Table 3).

On the Specific Heat Capacity and the Bound Water in Plants SOV/20-122-5-53/56

There are 3 figures, 4 tables, and 6 Soviet references.

ASSOCIATION: Institut fiziologii rasteniy im. K. A. Timiryazeva Akademii nauk SSSR (Institute of Plant Physiology imeni K. A. Timiryazev of the Academy of Sciences USSR)

PRESENTED: June 21, 1958, by A. L. Kursanov, Academician

SUBMITTED: June 21, 1958

Card 4/4

SHUL'GIN, I.A.; KLESHNIN, A.F.; VERBOLOVA, M.I.

Role of anthocyanins in the absorption of radiation energy by plant leaves. Nauch.dokl.vys.shkoly; biol.nauki no.2:166-174 '59. (MIRA 12:6)

1. Rekomendovana kafedroy darvinizma gosudarstvennogo universiteta im. M.V.Lomonosova.
(Anthocyanin) (Solar radiation) (Leaves)

KLESHNIN, A.F.; SHUL'GIN, I.A.

Energy balance of plant leaves in artificial light. Vest.Mosk.un. Ser.biol., pochv., geol., geog. 14 no.1:23-30 '59. (MIRA 12:9)
(Plants, Effect of light on)

17(1)

AUTHORS: Kleshnin, A. F., Shul'gin, I. A. SOV/20-125-5-56/61

TITLE: On the Optical Properties of Plant Leaves (Ob opticheskikh svoystvakh list'yev rasteniy)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 5, pp 1158-1161 (USSR)

ABSTRACT: The main part of the radiation energy which reaches the leaves is absorbed by them. It is used for all physiological processes and the processes of growth and development related to them. Although since Sachs (Ref 1, 1860) many papers have been published on the topic mentioned in the title, the number of modern papers is very low (Refs 5-9). Therefore it is necessary to investigate the topic mentioned systematically. The rules governing the distribution of the radiation energy absorption within the physiological range of the spectrum have to be determined for most of the plant species under natural conditions. For this purpose the authors investigated approximately 80 species from the central zone of the European part of the USSR according to the earlier published method (Ref 1). These species were planted in fields: sunflower (Helianthus annuus), potato (Solanum tuberosum), et al., altogether 6 species; vegetables: tomato (Solanum lycopersicum), pea (Pisum sativum),

Card 1/3

cucumber (Cucumis sativus), black radish (Cohlearia armoracia) et al, altogether 10 species; vegetables with a high water content in the leaves: onion (Allium cepa), lettuce (Lactuca sativa), common sorrel (Rumex domesticus), et al.- 5 species; ornamental plants: Perilla nankinensis, Phlox paniculata, peony (Peonia officinalis), Cineraria maritima, et al.- 10 species; wild herbaceous plants: Rubus saxalitis, violet (Viola tricolor), strawberry (Fragaria vesca) et al.- 10 species; trees: white poplar (Populus alba), birch (Betula verrucosa), lime-tree (Tilia vulgaris), hazel tree (Corylus avellana), common (British) oak (Quercus robur) et al.- 15 species; aquatic plants - hygro- and hydrophytes: Caltha palustris, Menyanthes trifoliata, Typha latifolia, Potamogeton praelongus, et al.- 15 species, which differ from one another by the chlorophyll content in the leaves and have different stands. It was found that the reflection, permeability, and absorption of radiation energy in the individual spectral ranges are rather similar in the major part of these plant species in spite of their different systematic and ecological classification and different stands. This was confirmed by the spectral curves (Fig 1). From these results the conclusion may be drawn that an optical system developed in the course of evolution of the plants: leave - plastides - pigments which got

accustomed to the optimum absorption of radiation energy within a rather narrow range, i. e. irrespective of the species characteristics of the plants. There are 3 figures and 11 references, 3 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov), Institut fiziologii rasteniy im. K. A. Timiryazeva Akademii nauk SSSR (Institute of Plant Physiology imeni K. A. Timiryazev of the Academy of Sciences, USSR)

PRESENTED: January 10, 1959, by A. L. Kursanov, Academician

SUBMITTED: January 9, 1959

SOV/20-125-6-55/61

17(1).
AUTHORS: Shul'gin, I. A., Kleshnin, A. F.

TITLE: On the Correlation Between the Optical Properties and the Chlorophyll Content in Plant Leaves (O korrelyatsii mezhdu opticheskimi svoystvami i soderzhaniyem khlorofilla v list'yakh rasteniy)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 6, pp 1371-1373 (USSR)

ABSTRACT: The pigment content varies considerably in the plant leaves (Ref 1). However, there are no data on the effects of different chlorophyll contents on the optical properties of leaves, in particular on the absorption of radiation energy. This effect was to be determined in the investigation under review. For this purpose, plants of the middle zone of the European USSR from natural growth conditions were used, both light-loving and shadow-loving plants being employed: herbs, woody plants, ornamentals, crops, and others, a total of 80 species. The optical properties were determined by the method indicated in reference 2. Figures 1-3 show the results. From them it may be concluded that in most of the above-mentioned plants (mainly

Card 1/2

On the Correlation Between the Optical Properties and the Chlorophyll Content in Plant Leaves

mesophytes) the optical properties - transmission, reflexion, and absorption - are independent of the chlorophyll content. Chlorophyll is mostly present in excess quantities. There are 3 figures and 2 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov) Institut fiziologii rasteniy im. K. A. Timiryazeva Akademii nauk SSSR (Institute of Plant Physiology imeni K. A. Timiryazev of the Academy of Sciences of the USSR)

PRESENTED: January 10, 1959, by A. L. Kursanov, Academician

SUBMITTED: January 9, 1959

SHUL'GIN, I. A., Cand Biol Sci -- (diss) "Optical properties of the leaves of plants in various geographic zones." Leningrad, 1960. 28 pp; with graphs; (Academy of Sciences USSR, Botannical Inst im V. L. Komarov); 300 copies; free; list of author's work on pp 27-28 (20 entries); (KL, 22-60, 135)

SHUL'GIN, I.A.; KLESHNIN, A.F.; VERBOLOVA, M.I.

Relation between optical properties and structural characters in plant leaves. Nauch. dokl. vys. shkoly; biol. nauki no.1:132-135 '60. (MIRA 13:2)

1.Rekomendovana laboratoriyey biologii razvitiya rasteniy Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova i Institutom fiziologii rasteniy AN SSSR.
(Leaves--Optical properties)

SHUL'GIN, I.A.; VERBOLOVA, M.I.

Optical properties of leaves of aquatic plants. Nauch.dokl.vys. shkoly: biol.nauki no.4:167-174 '60. (MIRA 13:11)

1. Rekomendovana kafedroy darvinizma Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova i Institutom fiziologii rasteniy AN SSSR im. K.A.Timiryazeva.
(AQUATIC PLANTS)
(LEAVES--OPTICAL PROPERTIES)

SHUL'GIN, I.A.; KLESHNIN, A.F.; PODOL'NYY, V.Z.

Optical properties of plant leaves in the ultraviolet region of radiation. Fiziol. rast. 7 no.2:141-144 '60. (MIRA 14:5)

1. Institut fiziologii rasteniy imeni K. A. Timiryazeva Akademii nauk SSSR, Moskva i Biologicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova.
(Leaves—Optical properties)
(Ultraviolet rays)

SHUL'GIN, I.A.; KLESHNIN, A.F.; BERBOLOVA, M.I.; PODOL'NYY, V.Z.

Studying optical properties of leaves in woody plants with the SF-4 spectrophotometer. Fiziol.rast. 7 no.3:300-308 '60. (MIRA 13:6)

1. K.A. Timiryazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow.

(Leaves--Optical properties) (Spectrophotometry)

KLESHNIN, A.F.; SHUL'GIN, I.A.; VERBOLOVA, M.I.

Optical properties of plant leaves. Bot. zhur. 45 no.4:492-506 Ap '60. (MIRA 14:5)

1. Institut fiziologii rasteniy im. K. A. Timiryazeva AN SSSR i Laboratoriya biologii razvitiya rasteniy Moskovskogo gosudarstvennogo universiteta.
(Leaves--Optical properties)

SHUL'GIN, I.A.; KLESHNIN, A.F.; VERBOLOVA, M.I.

Optical properties of plant leaves containing anthocyanins.
Biul. MOIP. Otd. biol. 65 no. 4:77-83 Jl-Ag '60. (MIRA 13:10)
(LEAVES--OPTICAL PROPERTIES) (ANTHOCYANIN)

SHUL'GIN, I.A.; KHAZANOV, V.S.; KLESHNIN, A.F.

Nature of the reflection of radiant energy as related to the structure of the leaf.. Dokl.AN SSSR 134 no.2:471-474 S '60. (MIRA 13:9)

1. Institut fiziologii rasteniy im.K.A.Timiryazeva AN SSSR i Vsesoyuznyy nauchno-issledovatel'skiy svetotekhnicheskiy insitut. Predstavleno akad. A.L.Kursanovym.
(Leaves--Optical properties)

SHUL'GIN, I.A.

Optical characteristics of xeromorphy and succulence in plant leaves. Dokl.AN SSSR 134 no.4:972-975 O '60. (MIRA 13:9)

1. Institut fiziologii rasteniy im. K.A. Timiryazeva Akademii nauk SSSR. Predstavleno akad.A.L. Kursanovym.
(Leaves--Optical properties) (Botany--Ecology)

SHCHERBINA, I.P.; SHUL'GIN, I.A.

Characteristics of some morphological and physiological corn types in the Kabardino-Balkar A.S.S.R. Nauch. dokl. vys. shkoly; biol. nauki no.3:169-172 '61. (MIRA 14:7)

1. Rekomendovana laboratoriyey biologii razvitiya rasteniy Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova.
(KABARDINA-BALKAR A.S.S.R.--CORN (MAIZE)--VARITIES)

SHUL'GIN, I.A.; KUPERMAN, F.M.; VYSLOUKH, V.A.; SHCHERBINA, I.P.

Chlorophyl content as a physiological index of heterosis in corn. Fiziol. rast. 8 no.6:754-756 '61. (MIRA 16:7)

1. Laboratory of the Biology of Development of Moscow University and K.A. Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow.
(Heterosis) (Corn (Maize)) (Chlorophyll)

KUPERMAN, F.M., prof. dr. biolog. nauk; PODOL'NYY, V.F.; SHUL'GIN, I.A., kand. biolog. nauk

Changes in the shape and size of sunflower leaves in connection with the stages of its organogenesis. Uch. zap. Kab.-Balk. gos. un. no. 10:31-40 '61. (MIRA 17:6)

SHCHERBINA, I.P.; SHUL'GIN, I.A., kand. biolog. nauk

Characteristics of the leaf apparatus in corn in the Kabardino-Balkar A.S.S.R. Uch. zap. Kab.-Balk. gos. un. no.10:41-46 '61.

Characteristics of the surface mass of corn leaves in the Kabardino-Balkar A.S.S.R. Ibid.:55-60 (MIRA 17:6)

VISLOUKH, V.A.; SHUL'GIN, I.A., kand. biolog. nauk

Effect of various climatic conditions under the conditions of vertical zonality on the growth of plants and changes in the pigment system of potato leaves. Uch. zap. Kab.-Balk. gos. un. no.10:47-54 '61. (MIRA 17:6)

SHUL'GIN,I.A.; KHAZANOV, V.S.

Light conditions in plant associations. Dokl. AN SSSR 141 no.6: 1493-1496 D '61. (MIRA 14:12)

1. Institut fiziologii rasteniy im. K.A.Timiryazeva AN SSSR i Vsesoyuznyy nauchno-issledovatel'skiy svetotekhnicheskiy institut. Predstavleno akademikom A.L.Kursanovym.
(Leaves--Optical properties)

SHUL'GIN, I. A.; KHAZANOV, V. S.; RZHANOVA, T. B.

Ratio of the surface and deep components of light reflected by plant leaves. Nauch. dokl. vys. shkoly; biol. nauki no.3:133-136 '62. (MIRA 15:7)

1. Rekomendovana kafedroy darvinizma Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova, Institutom fiziologii rasteniy AN SSSR i Vsesoyuznym nauchno-issledovatel'skim svetotekhnicheskim institutom.

(LEAVES—OPTICAL PROPERTIES)

SHUL'GIN, I.A.; KUPERMAN, F.M.; SHCHERBINA, I.P.

Relation between the chlorophyll content and stages of organogenesis in corn. Fiziol. rast. 9 no.3:347-352 '62. (MIRA 15:11)

1. Institut fiziologii rasteniy imeni K.A.Timiryazeva Akademii nauk SSSR, Moskva i Laboratoriya biologii razvitiya rasteniy Moskovskogo gosudarstvennogo universiteta.
(Corn (Maize)) (Chlorophyll)

SHUL'GIN, Igor' Aleksandrovich; KUPERMAN, F.M., prof., otv. red.; KLESHNIN, A.F., prof., otv.red.; DANIL'CHENKO, O.P., red.; GEORGIYEVA, G.I., tekhn. red.

[Morphological adaptations of plants to light; optical properties of leaves. A lecture from the course "Biology of plant development"] Morfofiziologicheskie prisposobleniia rastenii k svetu; opticheskie svoistva list'ev. Lektsiia iz kursa "Biologiia razvitiia rastenii." Moskva, Izd-vo Mosk. univ. 1963. 72 p. (MIRA 16:9)
(Leaves—Optical properties)

SHUL'GIN, I.A.; PODOL'NYY, V.Z.; SOKOLOVA, S.V.

A method for rapid determination of the chlorophyll content. Fiziol. rast. 10 no.3:383-386 My-Je '63. (MIRA 16:6)

1. K.A.Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow and Laboratory of Biology of Plant Development, Moscow State University.
(Chlorophyll) (Plants—Chemical analysis)

KHODORENKO, L.A.; SHUL'GIN, I.A.

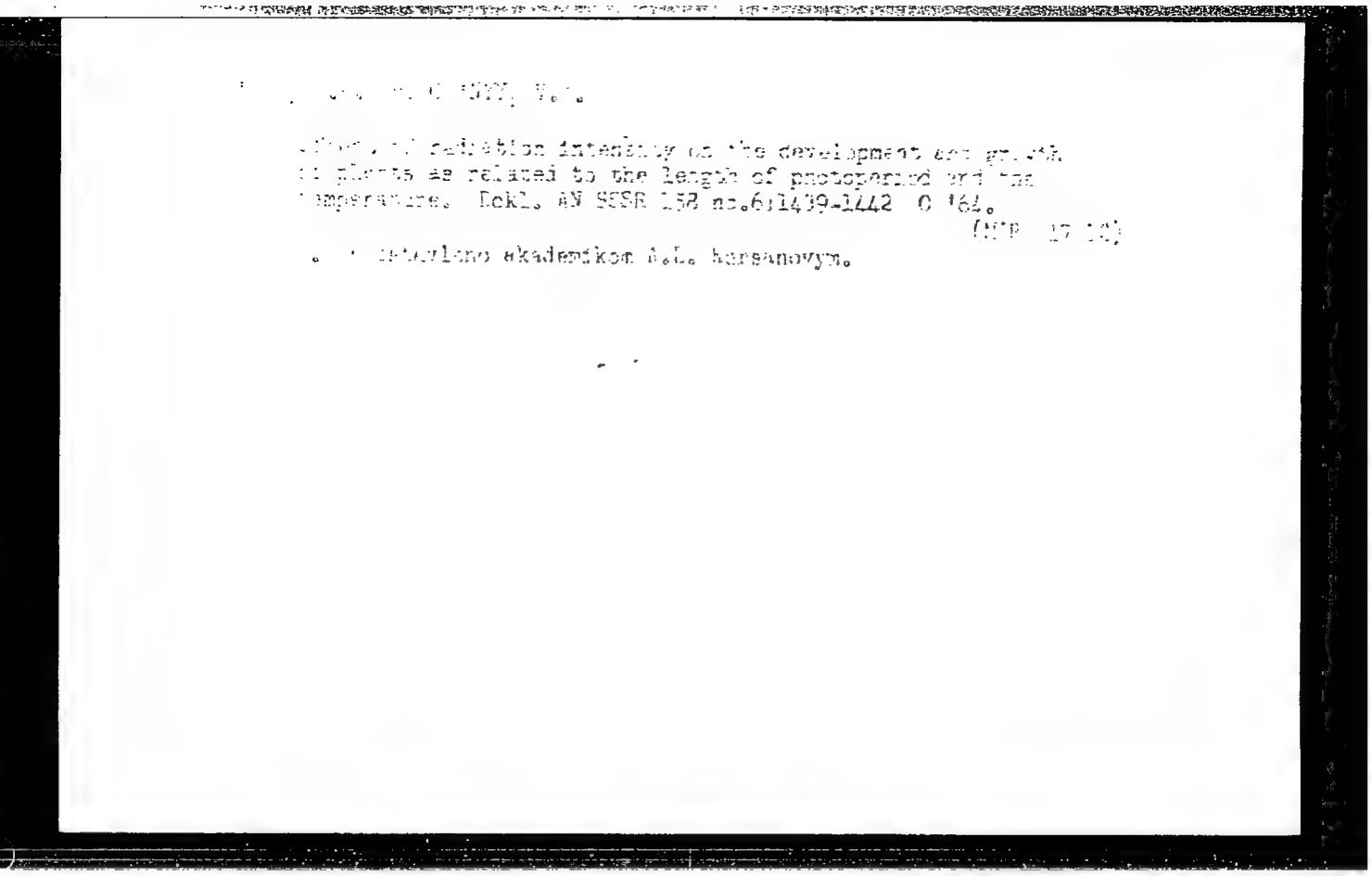
Effect of different illumination conditions on the anatomi-comorphological structure of radish leaves. Nauch. dokl. vys. shkoly; biol. nauki no.3:149-153 '64 (MIRA 17:8)

1. Rekomendovana kafedroy darvinizma Moskovskogo gosudarstvennogo universiteta.

SHUL'GIN, I.A.

Effect of visibile and infrared radiation on the growth and development of radishes. Fiziol. rast. 11 no. 3: 398-408 '64. (MIRA 17:7)

1. Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow.



[illegible] radiation intensity on the development and growth
[illegible] plants as related to the length of photoperiod and the
temperature. Dokl. AN SSSR 152 no.6:1439-1442 O '63.
(MIRA 17:10)

[illegible] akademikom A.L. Kursanovym.

Effect of the spectral composition and intensity of light on the development of plants cultivated under conditions of various wavelengths. Fiziol. rast. 12 no.2:289-300 Mr-Ap '65.
(MIRA 18:6)

1. Institut fiziologii rasteniy imeni Timiryazeva AN SSSR, Moskva.

SHUL'GIN, I.A.; MOLDAU, Kh.A.

Spectral coefficients of the luminosity of plant leaves in natural and polarized light. Dokl. AN SSSR 162 no.6:1430-1433 Je '65.
(MIRA 18:7)

1. Institut fiziologii rasteniy im. K.A.Timiryazeva AN SSSR i Institut fiziki i astronomii AN Estonskoy SSR. Submitted August 26, 1964.

L 27110-66

ACC NR: AP6017474 SOURCE CODE: UR/0020/65/162/006/1430/1433

AUTHOR: Shul'gin, I. A.; Moldau, Kh. A.

ORG: Institute of Plant Physiology im. K. A. Timiryazev, AN SSSR (Institut fiziologii rasteniy AN SSSR); Institute of Physics and Astronomy, AN EstSSR (Institut fiziki i astronomii AN EstSSR)

TITLE: Spectral coefficients of brilliance of plant leaves in natural and polarized light

SOURCE: AN SSSR. Doklady, v. 162, no. 6, 1965, 1430-1433

TOPIC TAGS: plant physiology, biophysics, light polarization

ABSTRACT: The authors used a spectrogoniograph to measure the spectral coefficients of brilliance of corn leaves in reflected and transmitted light. PF-42 filters were used to obtain polarized light and to determine the degree of polarization of the indicatrices. The nature of light diffusion by the leaves was found to vary with the absorption, degree of polarization, and location of the plane of oscillation of the electrical vector of incident light relative to the leaf surface. Moreover, the polarizing action of the leaf with incidence of nonpolarized light was different from its depolarizing action with incidence of polarized light. It was largely dependent on the region of the spectrum. Polarization was slight in the regions of weak absorption of radiant energy by the leaf;

Card 1/2

L 27110-66

ACC NR: AP6017474

pronounced, in the regions of strong absorption. This paper was presented by Academician A. L. Kursanov on 26August1964. Orig. art. has 3 figures. [JPRS]

SUB CODE: 06, 20 / SUBM DATE: 24Aug64 / ORIG REF: 009

Card 2/2

LUKASH, Aleksandr [illegible] by SHELYGIN, Igor' Dmitriyevich; VORONKOVA [illegible]

[Calculation of circulating regulated hot-water heating systems] Raschet protochno-reguliruemykh sistem vodianogo ot opleniia. Kiev, Budivel'nyk, 1965. 25 p.
(MIRA 18:8)

SHULGIN, I. G.

Issledovanie aliminievykh trub. Moskva, 1931. 16 p., tables, diagrs. (TSAGI. Trudy, no 80)

Summary in English.

Title tr.: Investigation of aluminum tubes,

SO: Aeronutical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

SHUL'GIN, I.G.

Issledovanie diuraliuminievoi provoloki. Moskva, 1931. 43 p., illus. (TSAGI. Trudy, no. 83)

Summary in English.

Title tr.: Investigation of duralumin wire.

QA911. M65 no.83

SO: Aeronutical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

SHUL'GIN, I.G.

Issledovanie diuraliuminievykh zaklepok Moskva, 1931. 79 p., illus., tables, diagrs.

Bibliography: p. 77-78.

Summary in English.

Title tr.: Investiagtion o duralumin rivets.

QA911.M65 no. 81

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

SHUL'GIN, I.G.

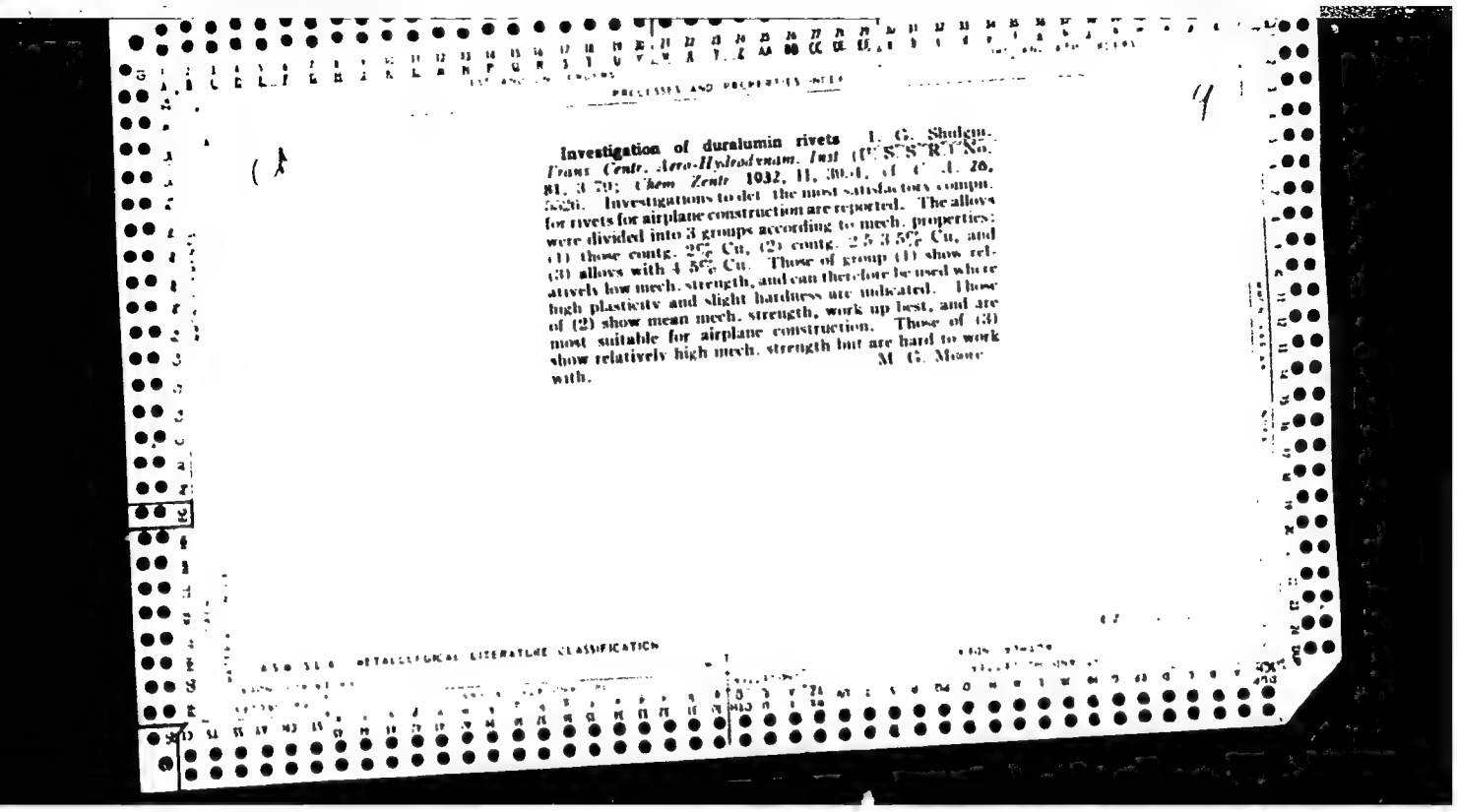
Issledovanie uprugoi i plasticheskoi deformatsii duraliuminievykh listov pri zagibe. Moskva, 1932. 36 p., illus., tables, diagrs. (TSAGI. Trudy, no.114)

Summary in English.

Title tr.: Investigation of elastic and plastic deformations of duralumin sheets during bending. -

QA911.M65 no.16

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.



Investigation of duralumin rivets L. G. Shulgin. *Trans. Centr. Aero-Hydrodynam. Inst.* (U.S.S.R.) No. 81, 3-79; *Chem. Zentr.* 1932, II, 30-1. [illegible] 26, 5826. Investigations to det. the most satisfactory composition for rivets for airplane construction are reported. The alloys were divided into 3 groups according to mech. properties: (1) those contg. 2% Cu, (2) contg. 2.5-3.5% Cu, and (3) alloys with 4-5% Cu. Those of group (1) show relatively low mech. strength, and can therefore be used where high plasticity and slight hardness are indicated. Those of (2) show mean mech. strength, work up best, and are most suitable for airplane construction. Those of (3) show relatively high mech. strength but are hard to work with.

M. G. Moore

Shul'gin, I.G.

SHUL'GIN, I.G.

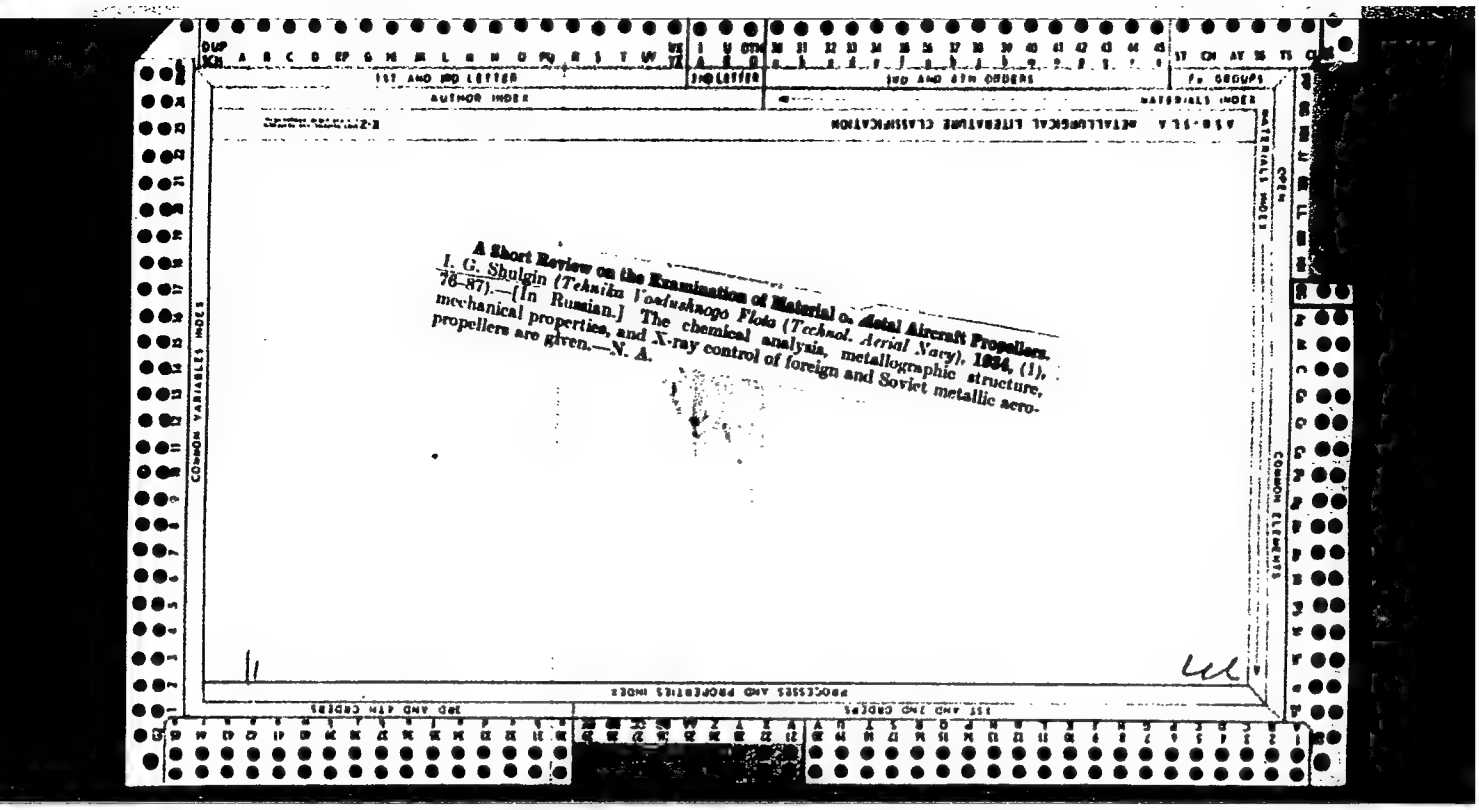
Issledovanie duraliuminievykh tolstostennykh profilei. Moskva, 1933. 38p., tables, diagrs. (TSAGI. Trudy, no. 143)

Summary in English.

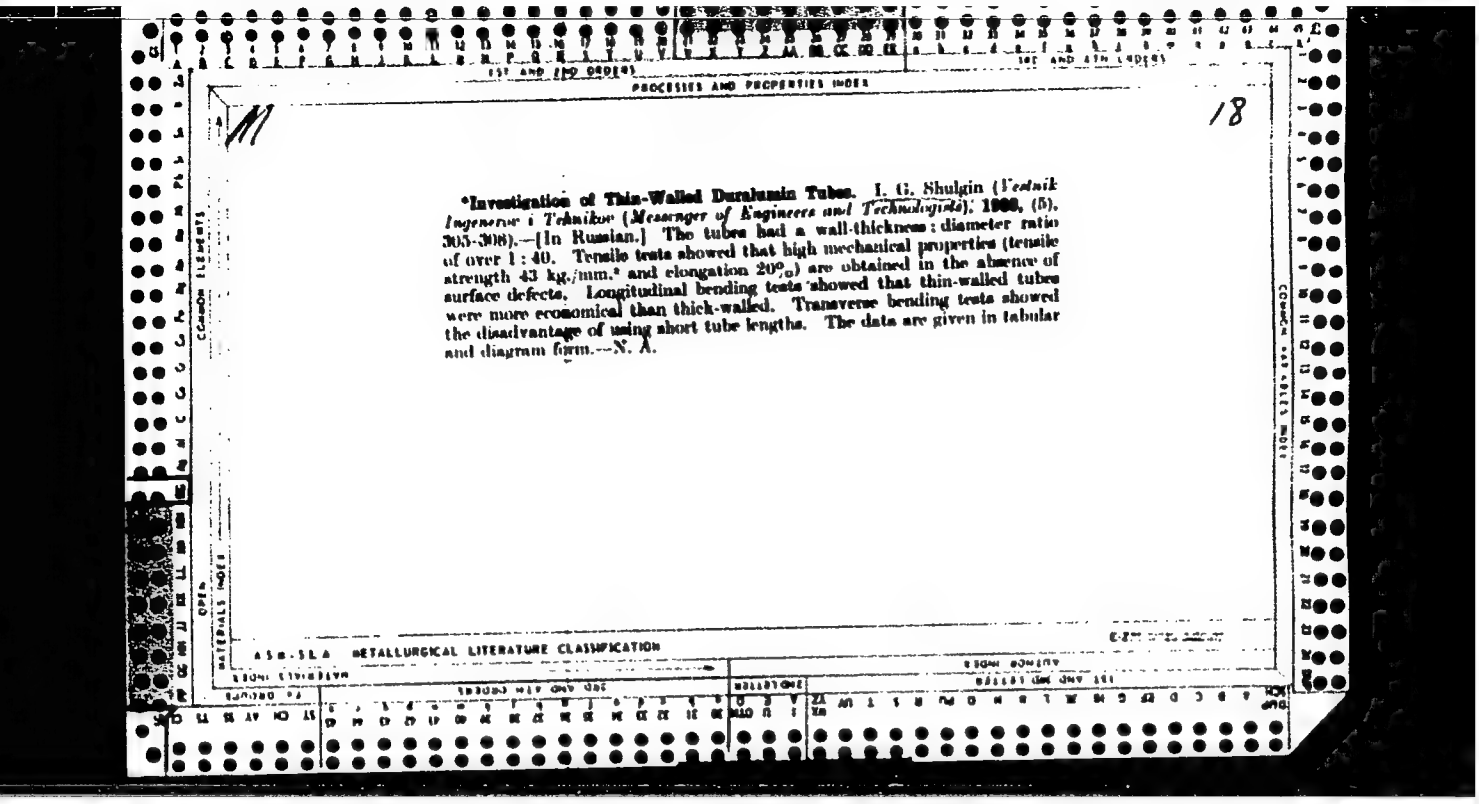
Title tr.: Investigation of duralumin thickwalled sections.

QA911.M65 no.143

SO: Aeronutical Sciences and Aviation in the Soviet Union, Library of Congress, 1955



A Short Review on the Examination of Material of Metal Aircraft Propellers. I. G. Shulgin (*Tekhnika Vozdushnogo Flota* (*Technol. Aerial Navy*), **1934**, (1), 78–87).—[In Russian.] The chemical analysis, metallographic structure, mechanical properties, and X-ray control of foreign and Soviet metallic aeropropellers are given.—*N. A.*

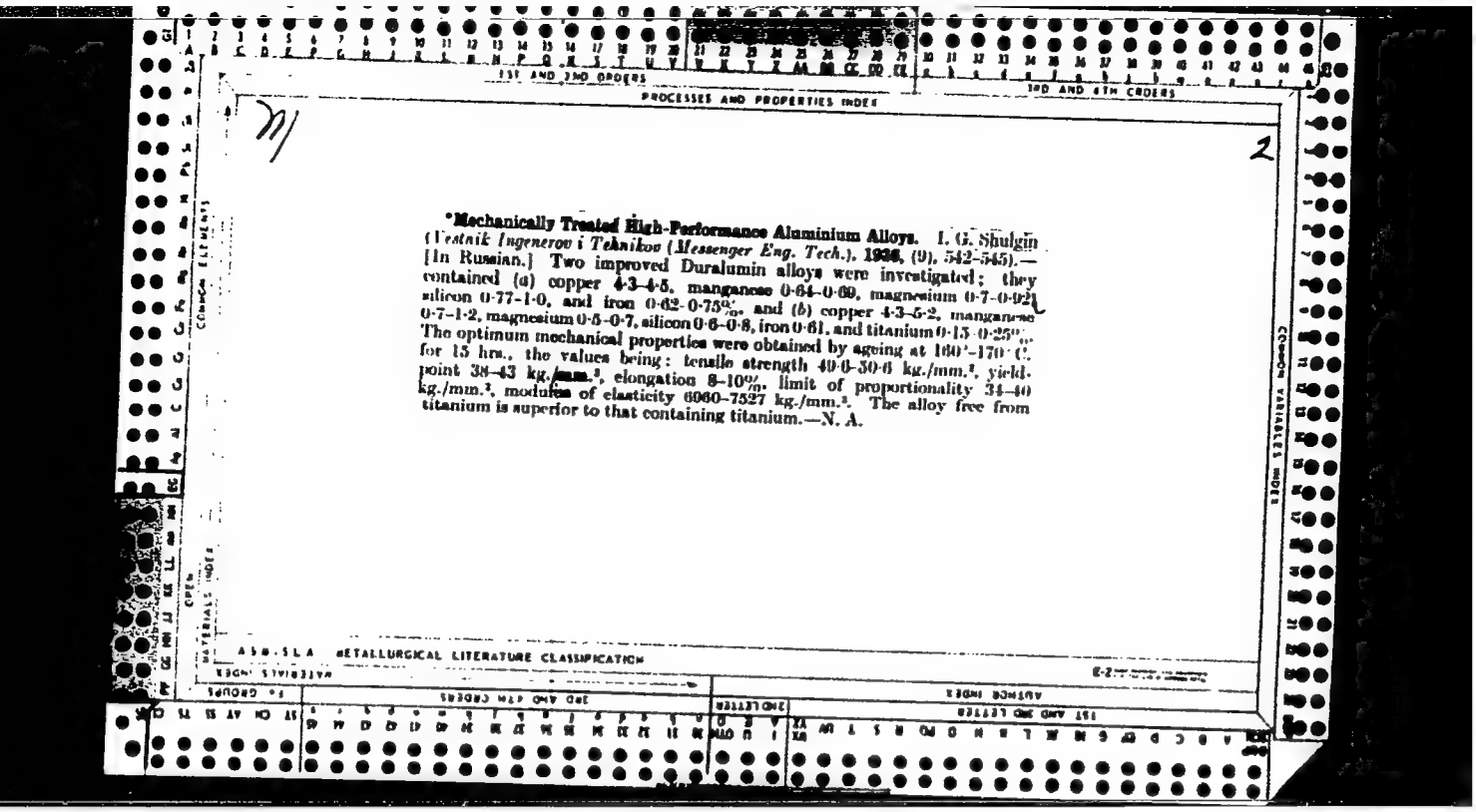


PROCESSES AND PROPERTIES INDEX

18

***Investigation of Thin-Walled Duralumin Tubes.** I. G. Shulgin (*Vestnik Ingenerov i Tekhikov* (*Messenger of Engineers and Technologists*), **1938**, (5), 305-308).—[In Russian.] The tubes had a wall-thickness : diameter ratio of over 1 : 40. Tensile tests showed that high mechanical properties (tensile strength 43 kg./mm.^{2} and elongation 20%) are obtained in the absence of surface defects. Longitudinal bending tests showed that thin-walled tubes were more economical than thick-walled. Transverse bending tests showed the disadvantage of using short tube lengths. The data are given in tabular and diagram form.—N. A.

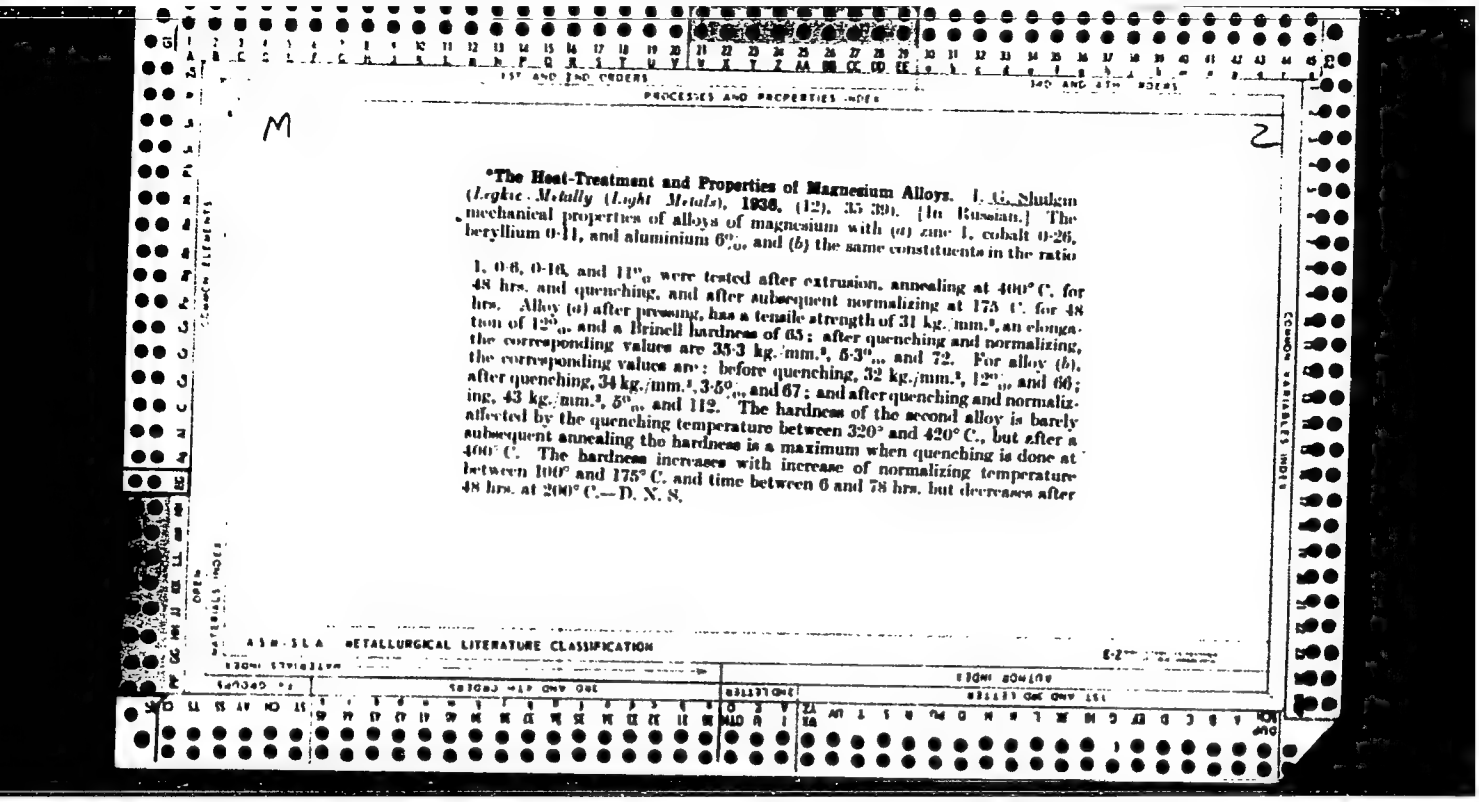
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

2

***Mechanically Treated High-Performance Aluminium Alloys.** I. G. Shulgin (*Vestnik Ingenerov i Tekhikov* (*Messenger Eng. Tech.*), **1936**, (9), 542–545).—[In Russian.] Two improved Duralumin alloys were investigated; they contained (*a*) copper 4·3–4·5, manganese 0·64–0·69, magnesium 0·7–0·92, silicon 0·77–1·0, and iron 0·62–0·75%, and (*b*) copper 4·3–5·2, manganese 0·7–1·2, magnesium 0·5–0·7, silicon 0·6–0·8, iron 0·61, and titanium 0·15–0·25%. The optimum mechanical properties were obtained by ageing at 160°–170° C. for 15 hrs., the values being: tensile strength 40·0–50·6 kg./mm.², yield-point 38–43 kg./mm.², elongation 8–10%, limit of proportionality 34–40 kg./mm.², modulus of elasticity 6060–7527 kg./mm.². The alloy free from titanium is superior to that containing titanium.—N. A.



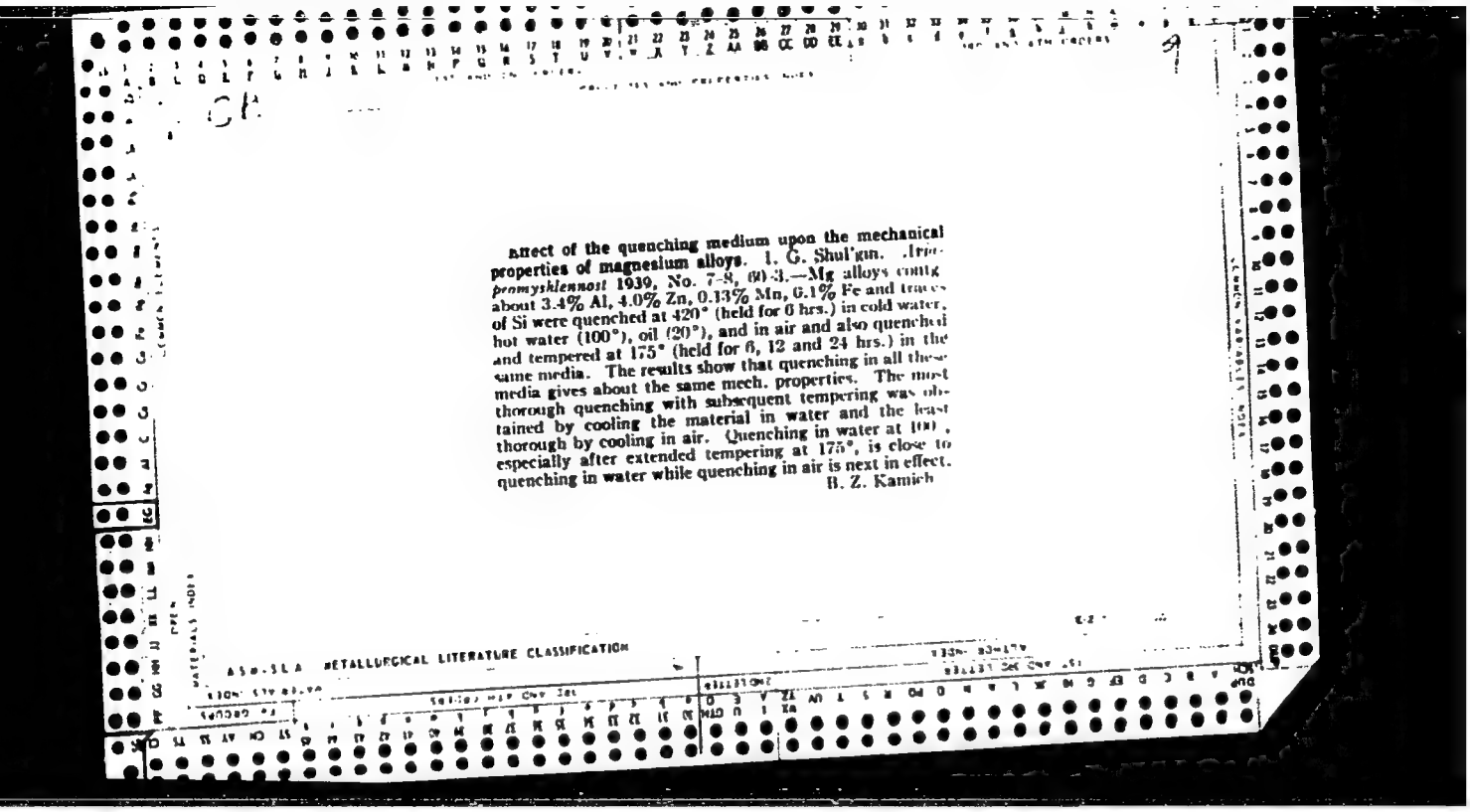
PROCESSES AND PROPERTIES INDEX

M

2

***The Heat-Treatment and Properties of Magnesium Alloys.** I. G. Slutskin (*Legkie Metally* (*Light Metals*), **1936**, (12), 35-39). [In Russian.] The mechanical properties of alloys of magnesium with (*a*) zinc 1, cobalt 0·26, beryllium 0·11, and aluminium 6%, and (*b*) the same constituents in the ratio 1, 0·6, 0·16, and 11%, were tested after extrusion, annealing at 400° C. for 48 hrs. and quenching, and after subsequent normalizing at 175° C. for 48 hrs. Alloy (*a*) after pressing, has a tensile strength of 31 kg./mm.², an elongation of 12%, and a Brinell hardness of 63; after quenching and normalizing, the corresponding values are 35·3 kg./mm.², 5·3%, and 72. For alloy (*b*), the corresponding values are: before quenching, 32 kg./mm.², 12%, and 66; after quenching, 34 kg./mm.², 3·5%, and 67; and after quenching and normalizing, 43 kg./mm.², 5%, and 112. The hardness of the second alloy is barely affected by the quenching temperature between 320° and 420° C., but after a subsequent annealing the hardness is a maximum when quenching is done at 400° C. The hardness increases with increase of normalizing temperature between 100° and 175° C. and time between 6 and 78 hrs. but decreases after 48 hrs. at 200° C.—D. N. S.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



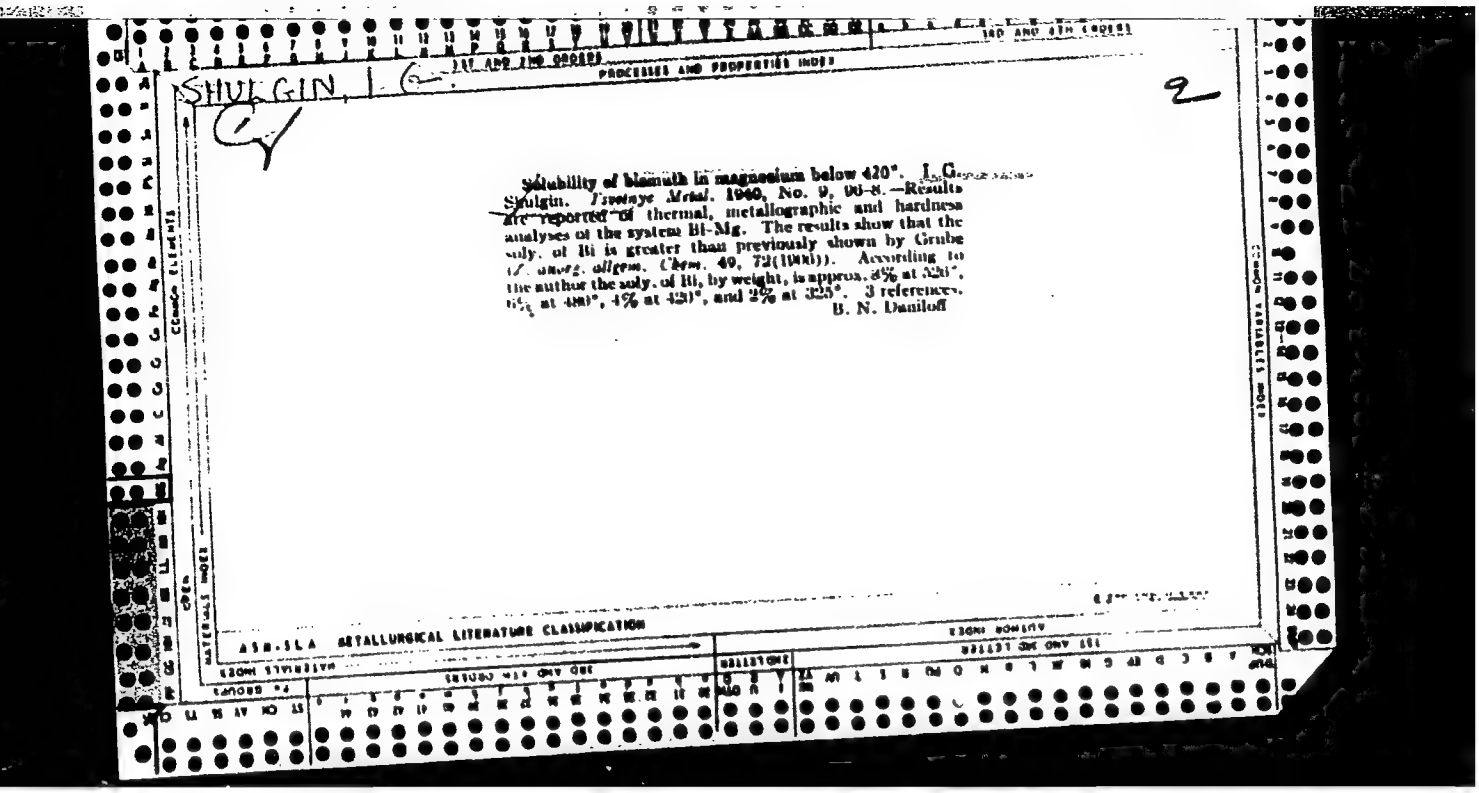
Effect of the quenching medium upon the mechanical properties of magnesium alloys. I. G. Shul'gin. *Tsvetnye metally i promyshlennost* 1939, No. 7–8, 60–3.—Mg alloys containing about 3.4% Al, 4.0% Zn, 0.13% Mn, 0.1% Fe and traces of Si were quenched at 420° (held for 6 hrs.) in cold water, hot water (100°), oil (20°), and in air and also quenched and tempered at 175° (held for 6, 12 and 24 hrs.) in the same media. The results show that quenching in all these media gives about the same mech. properties. The most thorough quenching with subsequent tempering was obtained by cooling the material in water and the least thorough by cooling in air. Quenching in water at 100°, especially after extended tempering at 175°, is close to quenching in water while quenching in air is next in effect.
B. Z. Kamich

MA

Properties of Alloys

[illegible]gnesium Alloys with Cobalt. I. G. Shul'gin (*Tsvet. Metally*, [illegible] 1940, (5-6), 138-142; *C. Abs.*, 1942, 36, 381). [In Russian.] [illegible] magnesium alloys was made under laboratory and plant conditions, [illegible] in air, with alloy additions in the following amounts: aluminum [illegible] 0-1.0, cobalt 0-0.62, and beryllium 0-1%. Rods were forged [illegible] 35 kg. ingots of 170 mm. diam., and tubes, 12 mm. inside diam. [illegible] outside diam., were drawn from 15-18 kg. hollow cylindrical ingots. [illegible] tubes were tested at room and at elevated temperatures in the [illegible] as-forged, and heat-treated conditions. At room temperature the [illegible] strength and Brinell hardness were about the same [illegible] 405° C., followed by a 48 hr. anneal at 175° C., as in the as-forged condition. [illegible] yield point after the heat treatment was 26-28.5 [illegible] 77% of [illegible] tensile strength. This is about 8% higher than the [illegible] 6 hr. anneal. Additional anneal [illegible] over 48 hrs. did not produce [illegible] further increase. With quenching from 420° C. [illegible] samples [illegible] obtained upon a 6 hr. anneal. The [illegible] beryllium, and zinc have little effect on the properties. [illegible] temperatures (100-400° C.) were made on [illegible] mm. rods previously heat-treated as follows: (1) quenched from 405° C. after 18 hr. [illegible] 48 hrs. at 175° C.; (2) annealed 24 hrs. at 350° [illegible] [illegible] of 50% in the yield point and tensile strength [illegible] 250° C. [illegible] temperature. As the testing temperature increases, the yield ratio [illegible] and approaches unity. As shown by the [illegible] quenching from 405° C. after holding for 18 hrs., and quenching from 420° [illegible] after holding for 6 hrs., gave identical results. The latter [illegible] temperature, and longer holding results in the deterioration of properties [illegible] of grain growth and the formation of [illegible] [illegible] detected no [illegible] cobalt in the alloys in any condition.

1942



SHULGIN, I. G.

2

Solubility of bismuth in magnesium below 420°. I. G. Shulgin. *Tsvetnye Metal.* 1940, No. 9, 90–8.—Results are reported of thermal, metallographic and hardness analyses of the system Bi-Mg. The results show that the solv. of Bi is greater than previously shown by Grube (*Z. anorg. allgem. Chem.* 49, 72(1906)). According to the author the solv. of Bi, by weight, is approx. 6% at 420°, 6% at 400°, 4% at 425°, and 2% at 325°. 3 references.

B. N. Daniloff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

SHUL'GIN, I. G., Docent

"Soldering of Aluminum Alloys on Salt Baths." Sub 14 May 51, Moscow Inst of Nonferrous Metals and Gold imeni M. I. Kalinin

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

SHUL'GIN, I.N.; KHAZANOV, V.S.; KLESHNIN, A.F.; RZHANOVA, T.B.

Scattering of radiant energy by plant leaves. Biofizika 6 no.6:734-739 '61. (MIRA 15:1)

1. Institut fiziologii rasteniy imeni K.A.Timiryazeva, Moskva i Vsesoyuznyy nauchno-issledovatel'skiy svetotekhnicheskiy institut.
(PLANT PHYSIOLOGY) (RADIATION--SCATTERING)

SHUL'GIN, K. (UA3DA)

Single-sideband electromechanical disc filter. Radio no.1:22-24 Ja '64. (MIRA 17:8)

SHUL'GIN, K.

USSR/Radio Receivers, Battery Apr 48
Radio Receivers, Superheterodyne

"Battery-Powered KV Superheterodyne," K. Shul'gin, 5 pp

"Radio" No 4

Describes battery-powered superheterodyne receiver, manufactured primarily for installation in agricultural communities. It has five bands (10, 14, 20, 40, and 160 meters), and operates on five tubes. Gives circuit diagrams, and performance.

4/49178

SHUL'GIN, K. A.

PA 51/49T79

USSR/Radio Jul 49
DOSARM

"All-Union Championships" 1 p

"Radio" No 7

Representatives of all 16 republics and almost all DOSARM radio clubs took part in the competitions. Many short-wave operators of Czechoslovakia, Rumania, and Hungary also participated. K. A. Shul'gin, Moscow, again was awarded the title, "Champion of the DOSARM."

[redacted] 51/49T79

SHUL'GIN, K.A.

[Building amateur short-wave receivers] Konstruirovanie liubitel'skikh korotkovolnovykh priemnikov. Moskva, Gos.energ.izd-vo, 1953. 142 p. (MLRA 6:7)

(Radio, Short-wave--Receivers and reception)

[illegible], K. PA 189T105

USSR/Radio - Receivers, Short-Wave Feb 51

"Organizing the Production of Receivers for Short-Wave Communications," K. Shul'gin, UA3DA

"Radio" No 2, pp 38, 39

Comments on Kostandi's article in "Radio" No 8, 1950. Kostandi's combination amateur and professional "1st-Class" receiver is not feasible, because amateur and professional use is so different that necessary characteristics could not be combined in one receiver. Makes recommendations for mass-produced short-wave receiver which could be used by amateurs and also in inter- and intra-oblast communications lines.

189T105

SHUL'GIN K.

181T99

USSR/Radio - Transmitters
Tubes

Apr 51

"Selection of Tubes for the Output and Intermediate Stages of a Transmitter," K. Shul'gin

"Radio" No 4, pp 36-40

Gives calcns and examples showing how to select tube for amplification stage in telegraph operation, for frequency-doubling stage, for grid-modulation stage, and for plate or plate-screen modulation stage. Gives table of characteristics for tubes used in transmitters, including tetrodes G-832, G-829, G-807, G-1625,

181T99

USSR/Radio - Transmitters (Contd) Apr 51

6P3, G-813, and GKE-100, and pentodes P-6, P-15, G-411, G-412, G-413, G-414, G-440, G-471, G-837, P-50, P-800, and RL12P35.

181T99

SHULGIN, V.

"Automatic Calls (Radio-Telegraph)," Soviet journal "Radio," Issue No. 4, 1952.

SHUL'GIN, K.

USSR/Electronics - Transmitters Jun 52

"Calculation of the Output Stage of a Transmitter," K. Shul'gin (UA3DA)

"Radio" No 6, pp 40-44

Gives a method for calculating the output stage of a transmitter for a given input power under telegraph operating conditions. Method is illustrated for the case of a G-807 beam tetrode as the output tube.

236T29

SHULGIN, K.

"Depending on the more active members."

So. Radio, Vol. 12, p. 10, 1952

SHUL'GIN, K. A.

Building amateur short-wave receivers. Moskva, Gos. energ. izd-vo, 1953. 142 p. (Massovaia radiobiblioteka, vyp. 171) (54-18906)

TK9956.S516

SHULGIN K

BURDEYNYY, F.; KAZANSKIY, N.; KAMALYAGIN, A.; SHUL'GIN, K.; SPIZHEVSKIY, I., redaktor; ZHURAVLEV, A., tekhnicheskiy redaktor.

[Handbook for short-wave radio operators; reference and instruction manual for radio amateurs] Spravochnik korotkovolnovika; spravochno-metodicheskoe posobie dlia radioliubitelei. Izd. 2-e, perer. i dop. Moskva, Izd-vo Dosaaf, 1953. 424 p. [Microfilm] (MLRA 7:11)
(Radio, Short wave)

SHUL'GIN, K.

Radio, Short-Wave

First book on ultra short waves. I. P. Zherebtsov. Reviewed by K. Shul'gin. Radio No. 3, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Uncl.

SHULIGIN, K.

Amplifiers, Vacuum - Tube

Input device and high frequency amplifiers. Radio No. 5, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

SHUL'GIN, K.

How the radio receiver works; low-frequency amplifier and regenerative detector. Radio no.6:52-55 Je '53. (MLRA 6:6)
(Amplifiers, Vacuum-tube) (Radio--Receivers and reception)

SHUL'GIN, K.

Short-wave sets at the 11-th All-Union Radio Exhibition. Radio no.7: 36-39 Jl '53. (MLRA 6:7)

(Radio, Short wave)

SHUL'GIN, K.

USSR/Electronics - Transmitters Dec 53

"Selection of Operating Conditions and Tuning of a Radiotelephone Transmitter," K. Shul'gin (UAZDA)

Radio, No 12, pp 36-40

Gives general discussions of amplitude, grid bias, and suppressor grid modulation with formulas, graphs, and diagrams. Concludes suppressor grid modulation is most advantageous of grid modulation systems.

276T35

USSR/ Electronics - Radio design

Card 1/1 ; Pub. 89 - 16/28

Authors : Shul'gin, K.

Title : What radio amateurs should work on in the short wave and ultra-short wave fields

Periodical : Radio 1, 31-33, Jan 1954

Abstract : A few problems in the short and ultra-short wave fields are outlined for radio-amateurs, to find good and ecomomical solutions for such problems as the construction of a antenna array, the construction of short-wave transmitting and receiving radios etc. It was also felt that measuring devices for the short and ultra-short wave radios will also be designed and constructed.

Institution: .....

Submitted: .....

USSR/ Electronics - Heterodyne receivers

Card 1/1 Pub. 89 - 31/40

Authors : Shul'gin, K.

Title : The operation of a superheterodyne receiving set

Periodical : Radio 10, 44-48, Oct 1954

Abstract : General technical information and instructions for the operation of a superheterodyne receiver are given. The following pertinent points are discussed: principles and characteristic features of superheterodyne reception; frequency conversion; "gang-tuning" of superheterodyne circuits, and others. Diagrams (including circuit and block diagrams); graphs.

Institution: .....

Submitted: .....

SHUL'GIN, K.

How superheterodynes work. Radio no.11:44-48 N '54. (MLRA 7:12)
(Radio--Receivers and reception)

KAMINIR, Lev Borisovich; SHUL'GIN, K.A., red.; VORONIN, K.P., tekhn.red.

[Cathode follower] Katodnyi povtoritel'. Moskva, Gos.energ. izd-vo, 1955. 55 p. (Massovaia radiobiblioteka, no.226) (MIRA 12:3)

(Cathode followers)

ZHEREBTSOV, I.P.; SHUL'GIN, K.A., redaktor; GRIGOR'YEVA, A.I., redaktor; KARYAKINA, M.S., tekhnicheskiy redaktor.

[Meter wave technique] Tekhnika metrovykh voln. Moskva, Izd-vo DOSAAF, 1955. 181 p. (MIRA 8:5)
(Radio waves)

SHUL'GIN, K.

USSR/ Electronics - Oscillatory circuit

Card 1/1 Pub. 89 - 25/28

Authors : Shul'gin, K.

Title : Oscillatory circuit

Periodical : Radio 4, 54-57, Apr 1955

Abstract : The oscillatory circuit consisting of an induction coil and a capacitor is described, and its various forms of application are explained. Diagrams; graphs.

Institution : .....

Submitted : .....

SHUL'GIN, K.

USSR/ Electronics - Amplifiers

Card 1/1 Pub. 89 - 20/24

Authors : Shul'gin, K.

Title : How does an amplifier function?

Periodical : Radio 5, 50 - 53, May 1955

Abstract : The performance of an electron low-frequency amplifier was demonstrated to a beginners class by using a two-stage NCh-amplifier as an example. It is explained that LF-amplifiers are divided into voltage and power amplifiers, the first of which amplifies the supplied voltage needed for the excitation of the power amplifier. The task of the latter is to increase the LF-oscillation intensity to a level necessary for normal performance of the loudspeaker connected to the amplifier output. Since electron tubes are integral parts of amplifiers the lecturer also explains the basic characteristics of such tubes. Diagrams; graphs.

Institution : .....

Submitted : .....

RIZKIN, Iosif Khaimovich; SHUL'GIN, K.A., redaktor; SKVORTSOV, I.M., tekhnicheskiy redaktor

[Frequency division] Delenie chastoty. Moskva, Gos. energ. izd-vo, 1956. 37 p. (Massovaia radiobiblioteka, no.245) (MLRA 9:10)
(Radio ciruits)